

SECOND SUBSTITUTE SPECIFICATION

08/17/2008

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SPECIFICATION

TITLE

**"DEVICE AND METHOD FOR ELECTROPHORETIC LIQUID
DEVELOPMENT"**

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BACKGROUND

For single- or multi-colored printing of a recording medium (for example a single sheet or a belt-shaped recording medium made from the most varied materials, for example paper or thin plastic or metal films), it is known to generate image-dependent potential images (charge images) on a potential image medium, for example a photoconductor, which image-dependent potential images correspond to the images to be printed that are comprised of regions to be inked and regions that are not to be inked. The regions to be inked (called image positions in the following) of the potential images are made visible with a developer station (inking station) via toner. The toner image is subsequently transfer-printed onto the recording medium (also called printing substrate or final image medium).

Either dry toner or liquid developer containing toner can thereby be used to ink the image positions.

A method for electrophoretic liquid development (electrographic development) in digital printing systems is, for example, known from EP 0 756 213 B1 or EP 0 727 720 B1. The method described there is also known under the name HVT (High Viscosity Technology). A carrier liquid containing silicon oil with ink particles (toner particles) dispersed therein is thereby used as a liquid developer. The toner particles typically have a particle size of less than 1 micron. More detail in this regard can be learned from EP 0 756 213 B1 or EP 0 727 720 B1, which are a component of the disclosure of the present application. Electrophoretic liquid development methods of the cited type with silicon oil as a carrier liquid with toner particles dispersed therein are described there, in addition to a developer station made from one or more developer rollers for wetting of the image carrier element with liquid developer corresponding to the potential images on the image carrier element. The